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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,357	06/14/2000	Ralf Haferbeck	P00,1277	3957

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EXAMINER

TSEGAYE, SABA

ART UNIT PAPER NUMBER

2616

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/826,357

Applicant(s)

HAFERBECK ET AL.

Examiner

Saba Tsegaye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendment filed 03/30/06. Claims 1-4 are pending. Currently no claims are in condition for allowance.

Claim Rejections - 35 USC § 103

2. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dempo (6,594,267), hereafter referred to as Dempo in view of Okabe et al. (US 6,031,838), hereafter referred to as Okabe.

Referring to claim 1, Dempo discloses ATM switching equipment (a variable length packet interchange, hereafter referred to as the “interchange” (see item 1 figure 1)) comprising a switching network (the interchange comprises a network (see figure 4)) an input interface unit including an input processing unit (the interchange comprises a plurality of interfaces (see item 10 in figure 4)), an output interface unit including an output processing unit (the interchange comprises output interfaces (see item 27 in Figure 4)), a microprocessor (the interchange has an associated CPU (see item 4 in figure 1)), a server switching unit (the interchange comprises a selector (see item 11 in figure 4)) comprising an AAL2 switcher that is connected to the switching network via a first interface (the selector has a selector section connected to the rest of the interchange (note, the entire system in Dempo involves processing AAL2 cells) (see item 11a in figure 6)), an input processing unit to which said AAL2 switcher is connected (the selector has a buffer control section (see items BC1-BC8 in figure 6)), and an output processing unit to which said AAL2 switcher is connected (a CPS-PDU transmission section (see item 11b in figure 6)),

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said switching equipment being configured to write a new VPI/VCI information for a further connecting section into cells of arriving data streams upon utilization of routing tables (the interchange performs header conversion of the VCI and VPI values using a routing table (see item 22 in figure 4, items 4 and 5 in figure 1, figure 5 and column 1 lines 45-67)), said AAL2 switcher being configured for simultaneous processing of a maximum plurality of incoming connections (the selector section has a plurality of inputs that make up a plurality of connections thus it is performing simultaneous processing of those connections (see figure 6)), an AAL2 routing list being provided for each of said incoming connections (there is a routing list associated for each incoming ATM connection depending on the associated VPI and VCI of the connections (see item 22 in figure 4, items 4 and 5 in figure 1, figure 5 and column 1 lines 45-67)) and said microprocessor being configured to limit an allowable value range for VPI/VCI values in a header of ATM cells according to a plurality of said AAL2 routing lists, so that said first interface considers corresponding VPI/VCI coding bits (inherently, the number of bits that represent the VPI and VCI values is limited to a certain number as described by the ATM standard used by Dempo, therefore there is only a range of values that the VPI and VCI can possibly be (see figure 5).

Dempo does not expressly disclose a microprocessor that limits the number of bits representing VPI/VCI bits from among VPI/VCI bits transmitted in a header of ATM cells to be interpreted according to a number of ATM connection available for processing.

Okabe teaches an ATM switching system connected to a switching network without requiring recognition of all VPI/VCI bits. As shown in Fig. 1, a first address converter 22 for converting a VPI/VCI included in the header of a cell to a cell address having a number of bits

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smaller than the number of bits of the VPI/VCI value. Further, Okabe teaches that the ATM switching system is capable of controlling the management of various data as well as the switching of cells based upon cell addresses (column 6, lines 16-41; column 17, lines 33-44).

It would have been obvious to one of ordinary skill in art at the time the invention was made to modify Dempo's apparatus to utilize a system where the CPU also has the capability to limit the number of bits representing VPI/VCI bits, as taught by Okabe. The motivation is more integrated and efficient system that will reduce the amount of hardware for various tables and processing circuits, thereby reducing cost.

Referring to claim 3, Dempo discloses the system discussed above. Furthermore, Dempo discloses a single virtual path is established between said switching network and said server switching unit (the selector is part of the interchange network as shown in figure 4 and since multiple paths through the network exist a single path also exists (i.e. there are numerous single virtual paths between the selector and switching network in Dempo).

Referring to claim 4, Dempo discloses the system discussed above. Furthermore, Dempo discloses buffer memories, which are allocated to said routing lists (a beer storing a table is allocated to routing header information (see item 5 in figure 1 and figure 2 and 5)), a section of an ALL2 packet of an A'TM cell being writeable into said buffer memories (the table in dynamic and thus it can be updated according to the VCI and VPI values of the incoming ATM headers (see item 5 in figure 1 and figure 2 and 5)), and said section being readable from said buffer memories when processing a next-successive ATM cell (the processing done using the

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routing table is continuous therefore the next incoming cell will also be processed by reading the table and writing the corresponds header values (see item 5 in figure 1 and figure 2 and 5)) and for completion of a remainder of said 4.à1,2 packet (inherently, the current cell being processed will be completed with its associated header so that it can be forwarded on to the destination (see item 5 in figure 1 and figure 2 and 5)).

Referring to claim 2, Dempo in view of Okabe discloses the system discussed above. Dempo in view of Okabe does not disclose that the first interface is a UTOPIA interface. However, the present application points out on page 5 lines 1 5-17 that UTOPIA is a standardized protocol that is well proven for connecting AAL2 switchers to switching networks. For these reasons it would have been obvious to one skilled in the art at the time of the invention to implement this feature in the system of Dempo in view of Okabe.

Response to Arguments

3. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant admitted that Okabe discloses limiting the number of bits representing VPVVCi bits. However, Applicant argues (Remarks, filed 12/29/05) that Okabe does not show "limiting the number of VPVVCi bits according to a number of ATM connections available for processing as indicated in the AAL2 routing lists." Examiner respectfully submitted that the rejection is based on the combined teaching of the Dempo patent and Okabe patent, and that the

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Dempo patent, as pointed out above in the Office Action does teaches this feature. Examiner believes that the claims, given their broad reasonable interpretation, read on the references applied.

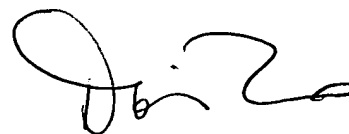
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
May 14, 2006



**DORIS H. TO
SUPERVISORY PATENT EXAMINER
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